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W. E. H.

An  
Inaugural Dissertation  
on  
Trachitis by

Charles H. Mathews

of  
Pennsylvania. —

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Journal of the

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of the

United States

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To

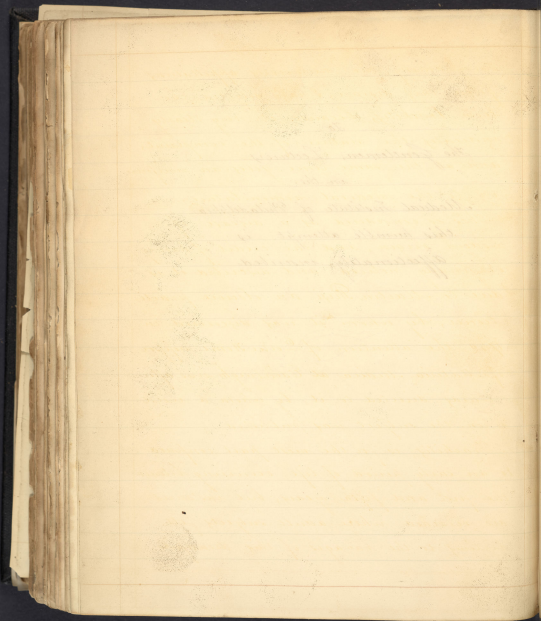
The Gentlemen Lecturers

in the

Medical Institute of Philadelphia

this humble attempt is

affectionately inscribed

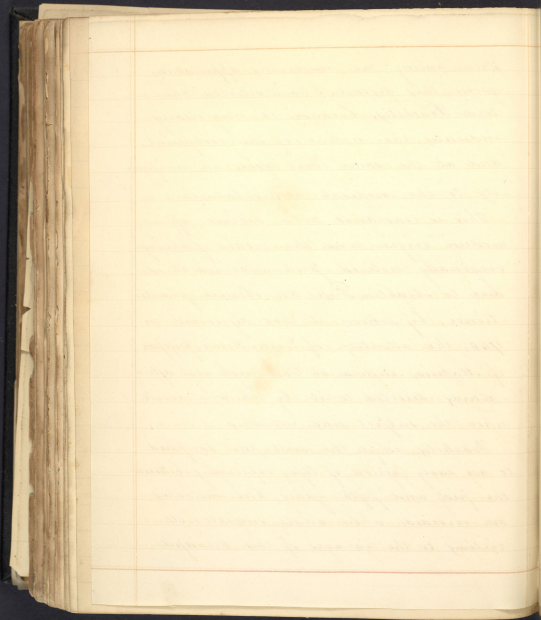




From among the numerous appellations given this disease, I have selected the term *Trachitis*, because it very clearly indicates the nature of the complaint, and at the same time gives an uniformity to the medical nomenclature.

This is considered as a disease of modern origin, and the credit of having originally noticed and described it is due to Martin Rijci an obscure practitioner, by whom it was discovered in 1749; the attention of Doctor Home professor of Materia Medica at Edinburgh was afterwards directed to it; by whom a work upon the subject was published.

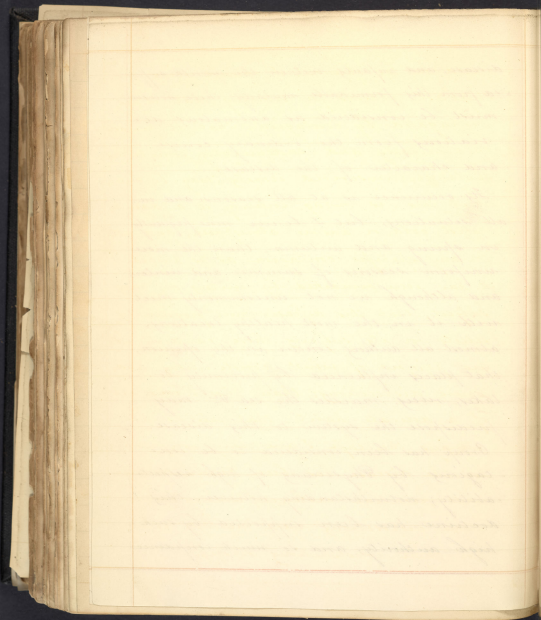
*Trachitis* is for the most part confined to an early period of life, occurring between the first and fifth years, but instances are recorded where adult subjects fell victims to the ravages of this dreadful



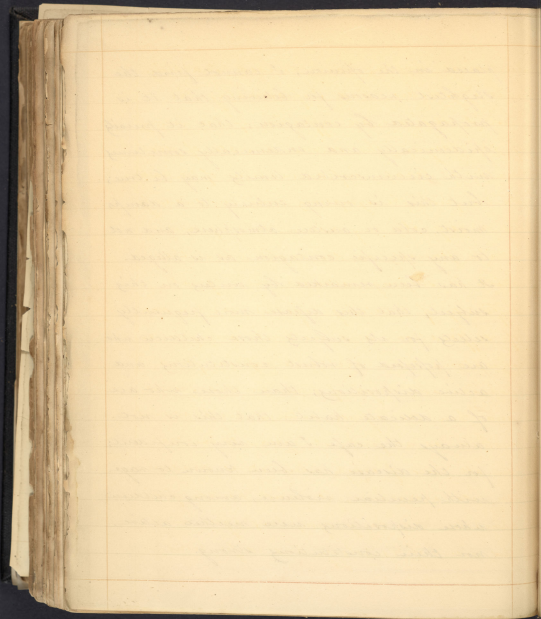
disease, and infants within the month suffered from this formidable malady; these however must be considered as anomalous deviations from the ordinary course and character of the disease.

Its occurrence is at all seasons and in all situations, but I believe more frequently in spring and autumn, than the more uniform seasons of summer and winter; and although we not uncommonly meet with it in the most healthy locations, almost all authors concur in the opinion, that places influenced by proximity to lakes, rivers, marshes the sea &c. may predispose the system to this disease.

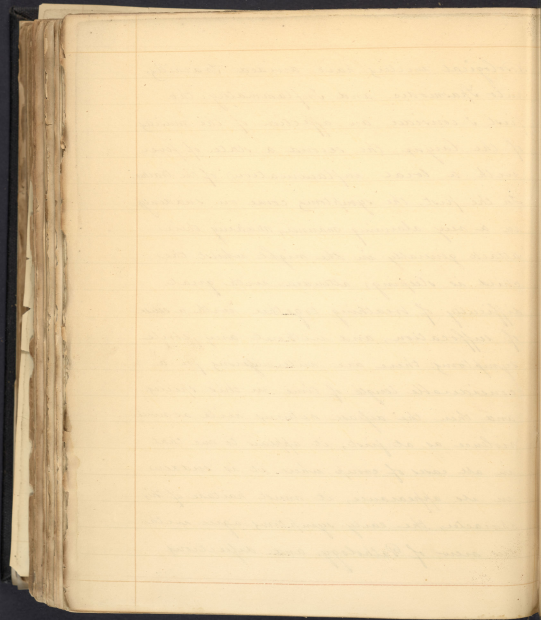
Gravap has been considered to be contagious by Physicians of high respectability; notwithstanding however this doctrine has been supported by such high authority, and so much confidence



placed in the opinion, I cannot find the slightest reasons for believing that it is propagated by contagion; that it prevails epidemically and endemically sometimes with circumscribed limits may be true; but this is owing entirely to a damp, moist, cold or austere atmosphere, and not to any specific contagion as is alleged. It has been remarked by writers on this subject, that this disease more frequently selects for its subjects those children who are possessed of robust constitutions and active dispositions; than those who are of a delicate habit: that this is not always the case I am very confident; for the disease has been known to rage with peculiar violence, among children whose dispositions were neither active, nor their constitutions strong.



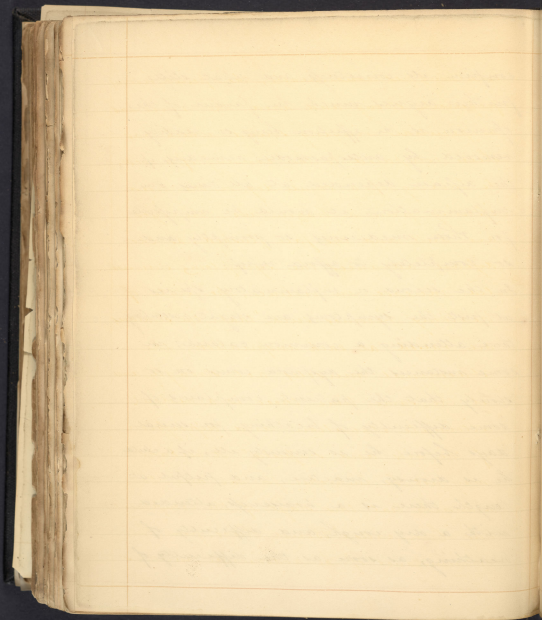
Medical writers have divided Trachitis,  
into Spasmodic and Inflammatory: the  
first I consider an affection of the muscles  
of the larynx: the second a state of fever  
with a local inflammation of the trachea.  
In the first, the symptoms come on suddenly  
in a very alarming manner, making their  
attack generally in the night whilst the  
child is sleeping; attended with great  
difficulty of breathing together with a sense  
of suffocation, and without any febrile  
symptoms: there are intermissions for a  
considerable length of time in this species,  
and then the disease returns with as much  
violence as at first; it appears to me that  
in all cases of croup where it is sudden  
in its appearance, it must partake of this  
character, the early symptoms agree with  
this view of Pathology, and dissections



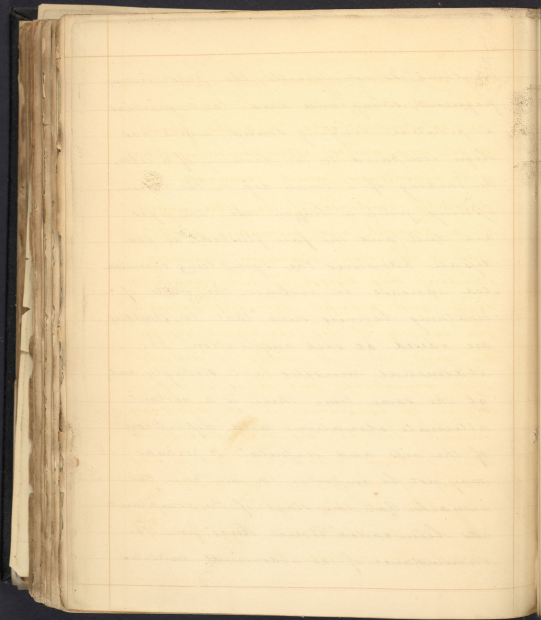


confirm its correctness; and what still further argues much in favour of the opinion is, the affection being so readily removed by antispasmodic remedies, if the disease depended at all times on inflammation, it would be impossible for those medicines so promptly and so completely to afford relief.

In the second or inflammatory species at first the symptoms are slight; resembling those attending a common catarrh; in some instances the dyspnoea comes on so slowly that the patient complains of some difficulty of breathing, for several days before he is seriously ill; if a child he is drowsy, inactive, and fretful; at length there is a hoarseness, attended with a dry cough, and difficulty of breathing, as soon as the difficulty of

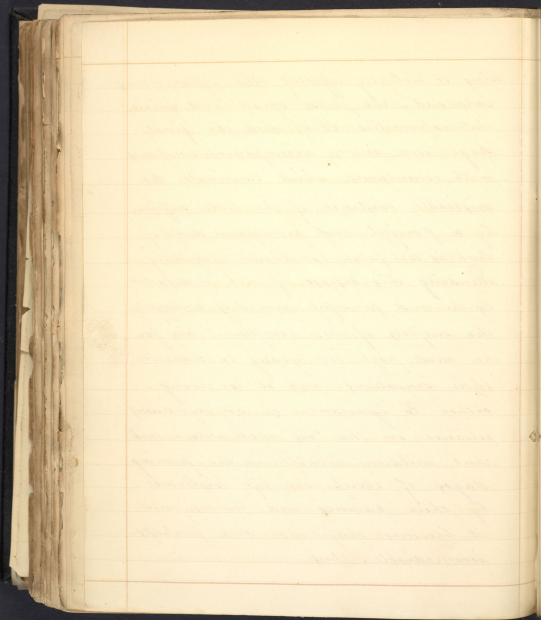


breathing is considerable, the pulse becomes frequent, strong and hard; the voice has a peculiar ringing sound, which has been compared to the crowing of a cock, the barking of a small dog, or the noise issuing from a hazen tube. the eyes are dull and the face flushed; as the disease advances the symptoms enumerated increase in violence, the state of breathing becomes such, "that the shoulders are raised at each inspiration, the abdominal muscles act strongly, and at the same time there is a violent alternate elevation and depression of the ribs and scapulae". It perhaps may not be improper for me here to remark that this stage of the complaint has been called "Bowel Rives," from the circumstance of the abdominal muscles



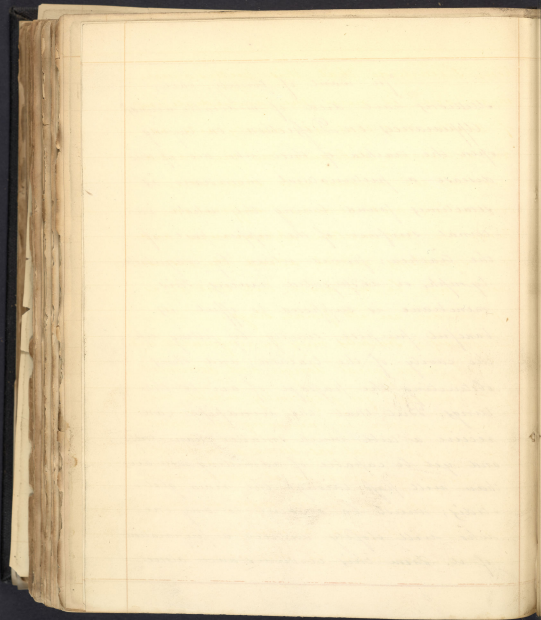
being so violently affected, the system becomes exhausted, the pulse small and quick, the extremities cold, and the final stage soon arrives, accompanied sometimes with convulsions, which terminate the miserable existence of the little sufferer, by a painful and premature death.

Such is the fatal conclusion frequently attending this disease, if not counteracted by the most powerful remedies; unhappily the subjects of this complaint are for the most part too young to describe their sensations: and it is owing either to ignorance or an injudicious reliance on the *vis medicatrix naturæ* that children curable in the forming stages of croup, are left neglected by their parents and nurses, until it becomes confirmed and perhaps irremediable; thus,



"If a want of timely care,  
Millions have died of medicable wounds."

Appearances on Dissection on laying  
open the trachea of those who die of this  
disease a preternatural membrane is  
sometimes found lining the whole in-  
ternal surface of the upper part of  
the trachea; formed either by coagulable  
lymph, or inspissated mucus. This  
membrane is supposed to effect its  
baneful purpose, simply by filling up  
the cavity of the trachea, and thus  
obstructing the passage of air to the  
lungs. But that the windpipe can  
receive a tube much smaller than itself,  
and yet be capable of admitting more air  
than will pass through the rima glot-  
tidis; must be evident to any one  
who will closely inspect a preparation  
of it. From this circumstance alone.





there, I conclude that this foetal membrane, is never the immediate cause of death; but that it merely acts as an extraneous substance in the trachea; throwing the muscles into spasmodic contraction, and inducing suffocation.

From the post mortem appearances and the symptoms which attend the disease, there can be no doubt, but that it is spasmodic in its final stage.

Diagnosis - Trachitis may be confounded with calarrh to the great danger and detriment of the patient; for frequently whilst the nursing mother is nursing her tender offspring (for what she deems a slight cold) the distressing period is at hand, when medical aid can be no longer serviceable; and the child falls a sacrifice to this disease - they may be distinguished

There is a great deal of  
work to be done in the  
field, but that is what we  
are determined to do. We  
are going to make the most  
of our situation and to  
bring the matter to a  
conclusion as soon as possible.  
From the last meeting of the  
the committee we have not  
yet seen it as well as it  
should be. We are now  
preparing to go to the  
field in the next few days  
and to make a full report  
of the results of our  
work. We are sure that  
our work will be of great  
value to the cause and  
we are confident that  
the committee will be  
satisfied with the results.

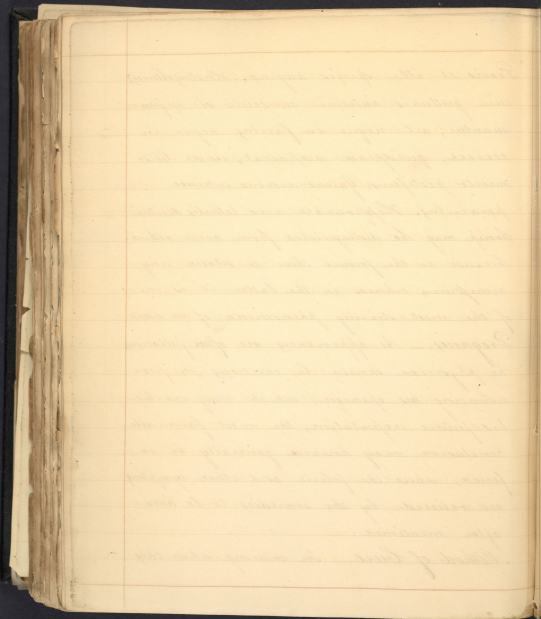
however by the sound of the voice in croup,  
and by the absence of sneezing, and deflue-  
-ions from the eyes, after the disease has  
continued some time, there can remain  
no difficulty whatever. It may be known  
from whooping-cough, from the circumstance  
of there being no stridulous sound of the  
voice, no dyspnoea in the intermissions of  
coughing, and from this last being con-  
-tagious. one of the chief diagnostic symptoms  
of Trachitis is, that however great the affection  
of the larynx may be, the deglutition is  
free. It has long been a maxim in  
medicine, even before there were any  
distinct ideas respecting this complaint,  
that that species of cynanche in which  
the respiration is impeded, without any  
redness or swelling appearing in the  
fauces, is most to be dreaded.



"Gravis et illa species angina, (Horsing's Musc)  
cum gutturiis interni musculi sic inflam=  
mantur, ut neque in facibus neque in  
cervice, quidpiam adpareat, unde belio  
merito pestiferus, Galeno morbus extreme  
peracutus, Hippocrate vero lethalis dicitur"  
Croup may be distinguished from acute asthma  
because in the former there is seldom any  
remission, whereas in the latter it is one  
of the most striking phenomena of the disease.

Prognosis. — As appearances are often fallacious,  
the physician should be cautious in pro=  
nouncing his opinion, which may involve  
his future reputation; the most favourable  
conclusion may however generally be in=  
ferred, where the febrile and other symptoms  
are relieved by the remedies to be here=  
after mentioned. —

Method of Cure. — In entering upon this



important part of our subject, it will be proper to treat of the employment of those remedies which are necessary to remove an attack of Trachitis: and the method to be pursued in obviating a recurrence, and first of Emetics. — Every one must acknowledge the superior efficacy of these, both in the commencement, and more advanced stages of this disease; they act as expectorants, clear the trachea of the phlegm and mucus so troublesome in the forming stages; and when the lungs "imperfectly execute their functions" in consequence of "being loaded and oppressed," the powers of copious vomiting in relieving engorgement, and re-establishing a free and equable circulation, are advantageously known. The tartarized antimony is most undoubtedly among the best we can use for this purpose; the certainty, extent



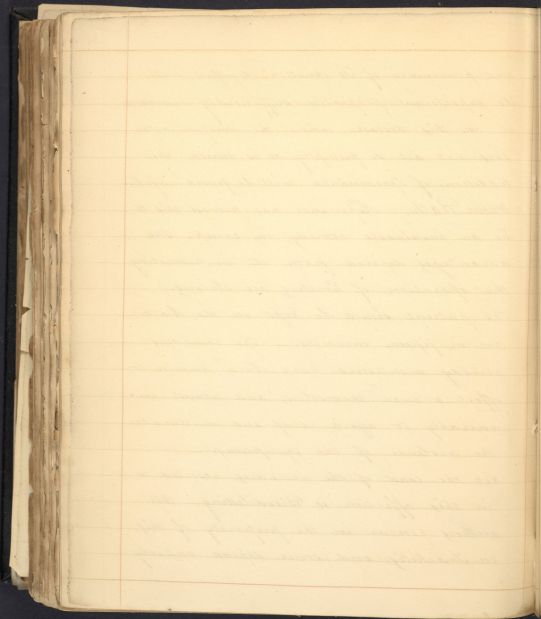


and permanency of its operation; together with its expectorant properties, sufficiently recommend it in this disease: where the emetic tartar does not act so promptly, as is desired the addition of Spicacuanha will be found useful.

Warm Baths.— Experience has proved this to be an invaluable remedy in croup. The advantages derived from it in promoting the operation of Emetics, are obvious.

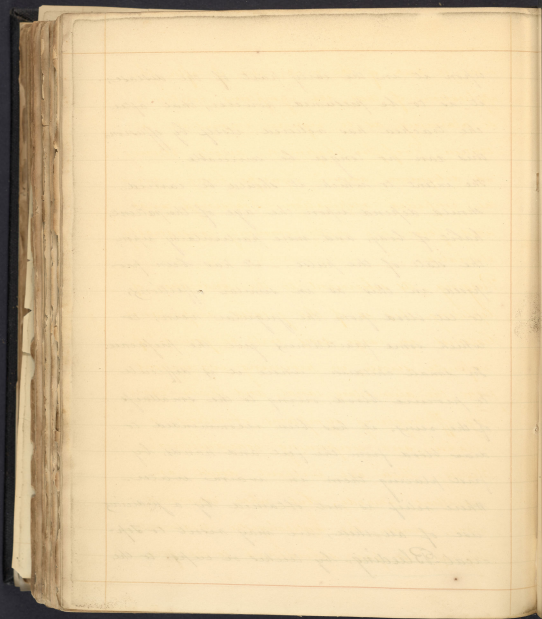
The patient should be kept in the bath ten or fifteen minutes. — The remedies already mentioned have been known to effect a cure <sup>of</sup> themselves, and almost invariably to afford relief and moderate the violence of the symptoms. —

Not the least of the remedies, resorted to in this affection, is Blood-letting — All authors concur in the propriety of this in Trachitis, and some depend entirely



upon it in the early part of the disease; it is to be presumed however, that "after the trachea has relieved itself by effusions this can no longer be serviceable.

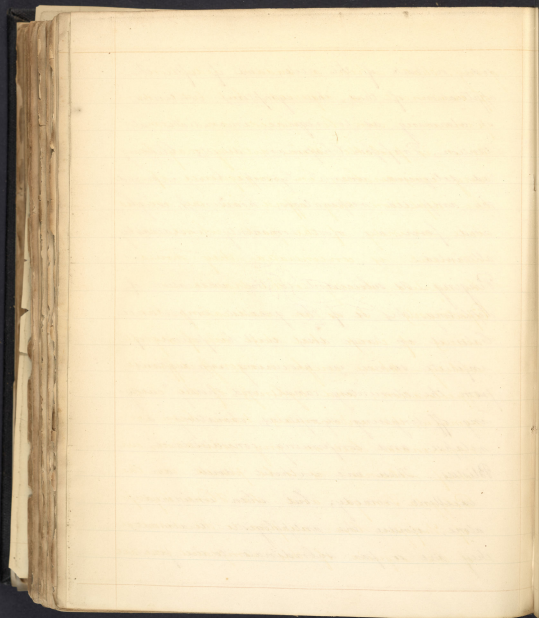
The extent to which it should be carried, should depend upon the age of the patient, habit of body, and more particularly upon the state of the pulse. - It has been proposed in this as in similar affections, to let blood from the jugular veins to which some practitioners give the preference. In small children where it is difficult to procure blood, owing to the smallness of the vein; it has been recommended to draw blood from the feet and hands, by first placing them in warm water. Where relief is not obtained by a judicious use of all these, we may resort to Topical Bleeding, by leeches or cups, to the



side or back of the neck; and if after the application of these, the symptoms continue so alarming, as to require immediate attention, Professor Chapman directs bleeding "*ad deliquium animi*." Syncope being induced the impeded respiration, hoarseness, cough and fever, are most commonly considerably alleviated.

Purging. - As subservient to the indication of depleting, this is of the greatest importance. Calomel in large doses will be found of infinite service, in procuring evacuations from the alimentary canal, and thereby "carrying off lingering symptoms, obviating a relapse, and confirming convalescence."

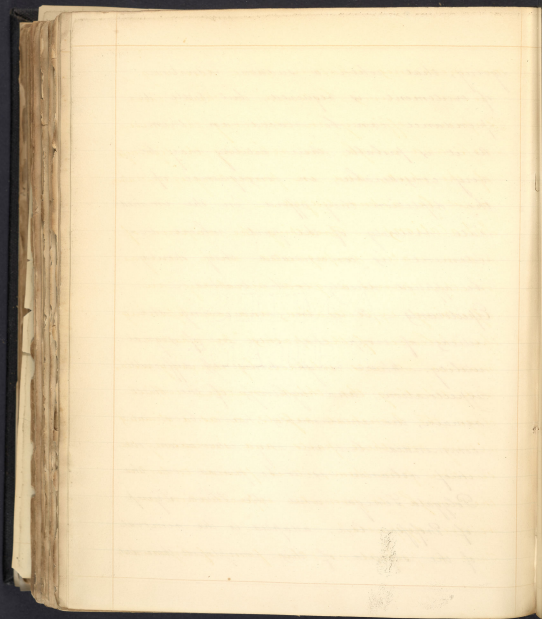
Blisters. - These are without doubt an excellent remedy; but when considered alone, under the antiphlogistic treatment, they are so far subordinate to the fore-



-going, that when a sudden reduction of excitement is required, but little dependance can be placed in them.

As it is probable their utility may be very considerable, in consequence of the depletion they afford in the immediate vicinity of the part where excitement is concentrated they should be applied directly to the trachea. —

Expectorants. — It is in radicalizing the relics of croup that these are of signal utility. — Where cough, hoarseness, difficult expectoration, and tightness of the chest remain, the antimonials have been recommended: but in my estimation, our chief reliance is to be placed on the *Polygala Senega* and the *Hive Syrup* of Professor Loe; adapted to the removal of the sequelae of this complaint, there are

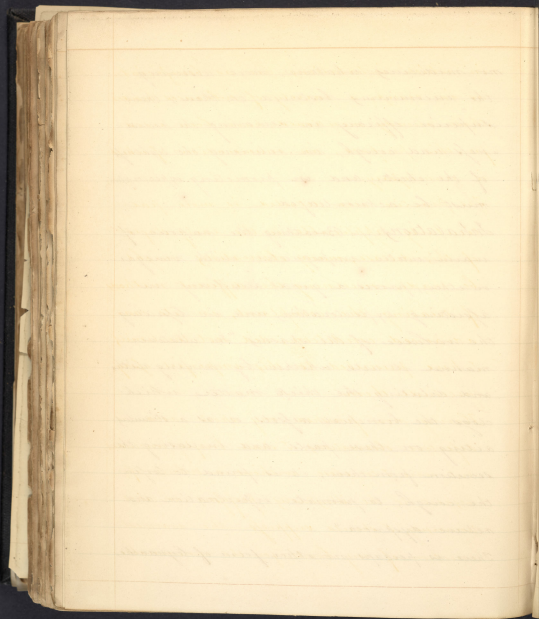




no medicines whatever, more deserving  
the encomiums bestowed on them; their  
superior efficacy in removing the hoarse-  
ness and cough, in relieving the tightness  
of the chest, and in promoting expectoration,  
must be acknowledged. —

Inhalations. — Breathing the vapour of  
warm water impregnated with vinegar  
or ether, proves a good auxiliary in  
assisting expectoration, and in lessening  
the violence of the spasms. "In whatever  
manner it acts, whether by mixing with,  
and diluting the thick matter, which  
clogs the bronchial vessels, or as a stimulus  
acting on these parts and increasing the  
secretion from them, it is found to loosen  
the cough, to promote expectoration and  
relieve dyspnoea."

There is perhaps no other form of larynchitis,



in which inhalations are as beneficial, as in croup; a variety of substances besides those already mentioned, have been used for this purpose, an enumeration of which is unnecessary. -

The practice here detailed is more particularly applicable to the early stages of this disease, many observations might be made, concerning the different methods of treating the complaint, in its more advanced condition, did not the limits I have prescribed to this imperfect essay, preclude them.

Having now finished my short and defective observations, I shall briefly conclude, but were I to close without a tribute of respect to the illustrious professors in this University, I should suppress the warmest emotion of my heart for the innumerable



2  
advantages I have derived from your  
public lectures and private communica-  
-tions, permit me to tender my  
sincere acknowledgements.

Every student who has had the good  
fortune to visit this college, must be  
convinced of her superior method of  
imparting medical knowledge and of  
the indefatigable exertions of her Pro-  
-fessors in giving instruction. —

